

AMENDMENTS TO THE CLAIMS

The text of all pending claims, including withdrawn claims, is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1-14. (Cancelled)

15. (Previously Presented) A carriage for an ink cartridge of an image forming apparatus comprising:

a carriage body having a mounting portion, in which the ink cartridge having a latching portion is accommodated;

a latch rotatably disposed at the carriage body to close the mounting portion by locking, that when unlocking with respect to the carriage body, draws the ink cartridge out of the mounting portion;

a resilient latch member to resiliently bias the latch in an opening direction;

a locking unit to lock the latch to the carriage body; and

a sliding unit that limits an opening angle of the latch with respect to the carriage body, wherein the sliding unit comprises:

a sliding protrusion disposed on the latch; and

a sliding hole portion disposed on the carriage body opposite to the sliding protrusion, to accommodate the sliding protrusion, and

wherein the sliding hole portion comprises:

a first penetrating hole receiving the sliding protrusion at a first position when the latch is locked;

a second penetrating hole receiving the sliding protrusion at a second position when the latch is opened; and

a connection portion connecting the first and the second penetrating holes.

16. (Original) The carriage of claim 15, wherein the connection portion has a distance defined between opposing surfaces thereof that is smaller than a diameter of the sliding protrusion.

17-21. (Cancelled)

22. (Cancelled)

23. (Previously Presented) A carriage for an ink cartridge, comprising:
a carriage body, movable on a guide rail, and having a mounting portion to receive the ink cartridge, and an opening, through which the ink cartridge is selectively installed;
a latch, rotatably connected to the carriage body, to selectively open and close the opening;
a resilient latch member to resiliently bias the latch in an opening direction; and
a locking unit to lock the latch to the carriage body,
wherein the ink cartridge is lifted from the mounting portion when the latch opens the opening, and
wherein the locking unit comprises:
a locking projection connected to the carriage body;
a release handle rotatably connected to the latch; and
a hook member rotatably connected to the latch, that engages and disengages the locking projection when the release handle is rotated in a locking direction and an unlocking direction, respectively.

24. (Original) The carriage according to claim 23, wherein:
the release handle and the hook member are integrally formed.

25-26. (Cancelled)

27. (Original) The carriage according to claim 23, wherein:
the hook member and the release handle rotate coaxially.

28. (Original) The carriage according to claim 27, wherein:
the hook member and the release handle are integrally formed, and rotate concurrently.

29. (Original) The carriage according to claim 23, wherein:
the hook member and the release handle rotate concurrently.

30. (Original) The carriage according to claim 23, wherein the release handle comprises:

a resilient release handle member to bias the hook member toward the locking projection.

31. (Cancelled)

32. (Original) The carriage according to claim 30, wherein the resilient release handle member comprises:

a spring interposed between the latch and the release handle.

33. (Original) The carriage according to claim 23, wherein:

the locking projection is positioned at a side wall of the carriage body.

34-35. (Cancelled)

36. (Original) The carriage according to claim 23, wherein the latch comprises:

a latch body rotatably connected to the carriage body; and

a guide arm extending from the latch body to guide side surfaces of the ink cartridge.

37. (Original) The carriage according to claim 36, wherein:

the ink cartridge comprises a latching portion positioned at the side surfaces of the ink cartridge; and

the guide arm comprises

a first guide portion that engages the latching portion to lift the ink cartridge when the latch opens the opening, and

a second guide portion extending stepwise from the first guide portion to guide the latching portion.

38. (Original) The carriage according to claim 37, wherein:

the guide arm has a predetermined curvature so that the ink cartridge moves toward the mounting portion when the ink cartridge is removed from the carriage body.

39. (Original) The carriage according to claim 38, wherein:
an area where a first surface of the first guide portion contacts a first portion of the latching portion increases as the latch opens the opening.
40. (Original) The carriage according to claim 36, further comprising:
a sliding unit to limit an opening angle of the latch.
41. (Original) The carriage according to claim 40, wherein the sliding unit comprises:
a sliding protrusion protruding from the latch body; and
a sliding enclosure positioned in the carriage body to correspond to the sliding protrusion, and in which the sliding protrusion moves.
42. (Original) The carriage according to claim 41, wherein the sliding protrusion is approximately cylindrical.
43. (Original) The carriage according to claim 42, wherein the sliding enclosure comprises:
a first enclosure region;
a second enclosure region; and
a connection region, connecting the first and second enclosure regions,
wherein the sliding protrusion is received in the first enclosure region when the latch has closed the opening, and the sliding protrusion is received in the second enclosure region when the latch has opened the opening.
44. (Original) The carriage according to claim 43, wherein:
the first and second enclosure regions have approximately the same diameter.
45. (Original) The carriage according to claim 43, wherein:
a diameter of the first enclosure region is larger than a diameter of the second enclosure region.
46. (Original) The carriage according to claim 43, wherein:
a distance between opposing surfaces of the connection region is smaller than a diameter of the sliding protrusion.

47. (Original) The carriage according to claim 46, wherein:
the distance between the opposing surfaces of the connection region is approximately 80-90% of the diameter of the sliding protrusion.

48. (Original) The carriage according to claim 40, wherein:
the opening angle is limited by the sliding unit to approximately 20-30°, wherein the opening angle is defined at an intersection between a first imaginary line parallel to a first surface of the latch when the latch has closed the opening, and a second imaginary line parallel to the first surface of the latch when the latch has opened the opening.

49. (Original) The carriage according to claim 48, wherein:
the opening angle is limited by the sliding unit to approximately 21°.

50-51. (Cancelled)